

NISHIMURA, SN 09/917,707
Amdt. filed 20 August 2004
Reply to OA dated 20 May 2004

Dkt. No. 520.40379X00/NT0388US
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ABSTRACT OF THE DISCLOSURE

~~A~~ The invention of the present application provides a high-speed and small-sized optical interconnection device ~~using~~ uses wavelength-multiplexed light suitable therefor in order to make compatible between an increase in high-speed communication capacity of the optical interconnection device and an increase in high-speed communication distance thereof. ~~A~~ According to the invention of the present application, a signal processing LSI is placed within a central portion of a main surface of a semiconductor substrate, and input/output units for transmitting and receiving optical wavelength-multiplexed lights are multi-chip integrated on the periphery of the main surface of the semiconductor substrate ~~substrate~~, whereby ~~they are integrated~~ into a single package, and a wiring length can be reduced and a physical signal band for each connecting wiring can be enlarged. Further, the signal processing LSI is made up of CMOS and a driver circuit for each optical transmitting/receiving element is comprised of a Si-Ge transistor circuit, whereby a modulated signal band can be enlarged and the performance of the input/output of optical signals from the device can be improved.